

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1. (Currently Amended) Composition intended for the implementation of a cytotoxic treatment in mammals, comprising:

(i) a nucleic acid sequence encoding all or part of an MIP chemokine or a natural variant of MIP1 α or MIP1 β ,

(ii) at least one nucleic acid sequence encoding IL-2,
said nucleic acid sequences being placed under the control of the elements required for their expression in a host cell of said mammal;

wherein the compound is directly administered via a vector or a mixture of vectors expressing both IL-2 and a MIP chemokine;

and wherein the IL-2 and MIP chemokine work together synergistically.

Claims 2-6. (Canceled)

Claim 7. (Currently Amended) The composition according to Claim 1, comprising in (ii) at least two nucleic acid sequences encoding interleukin-2 (IL-2) ~~and all or part of interferon gamma (IFN- γ).~~

Claim 8-10. (Canceled)

Claim 11. (Previously Presented) Composition according to Claim 1, wherein said nucleic acid sequences (i) and (ii) are inserted into a recombinant vector of plasmid or viral origin.

Claim 12. (Previously Presented) Composition according to Claim 11, wherein said nucleic acid sequences (i) and (ii) are inserted into the same recombinant vector.

Claim 13. (Previously Presented) Composition according to Claim 11, wherein said nucleic acid sequences (i) and (ii) are inserted into distinct recombinant vectors.

Claim 14. (Previously Presented) Vector comprising:

- (i) a nucleic acid sequence encoding MIP1 α , MIP1 β chemokine or a natural variant of MIP1 α or MIP1 β , and
- (ii) at least one nucleic acid sequence encoding IL-2,

said nucleic acid sequences being placed under the control of the elements required for their expression in a host cell.

Claim 15. (Previously Presented) Vector according to Claim 14, wherein it is a viral vector.

Claims 16-18. (Canceled)

Claim 19. (Currently Amended) Formulation intended for the implementation of a cytotoxic treatment in mammals, comprising a the composition according to Claim 13; or Claim 1, and a support which is pharmaceutically acceptable.

Claim 20. (Previously Presented) Formulation according to Claim 19, comprising capable of being transformed into a cytotoxic molecule by a polypeptide having at least cytotoxic activity.

Claims 21-23. (Canceled)

Claim 24. (Previously Presented) A method for treating a proliferative disease in a patient in need, said method comprising administering an effective amount of the composition of Claim 1 by direct administration into an accessible tumor or at its periphery.

Claim 25. (Previously Presented) The composition according to claim 13, wherein said recombinant vectors are adenoviral vectors defective for the replication.

Claim 26. (Previously Presented) The vector of claim 15, wherein said viral vector is an adenoviral vector deriving from an adenovirus.

Claim 27. (Previously Presented) The vector of claim 26, wherein said adenoviral vector is defective for replication.

Claim 28. (Previously Presented) The vector of claim 27, wherein said adenoviral vector defective for replication is deleted of the E1 region.

Claim 29. (Previously Presented) The vector of claim 27, wherein said adenoviral vector defective for replication is deleted of the majority of the E1 and of the E4 regions.

Claim 30. (Previously Presented) The vector of claim 28 or 29, further lacking all or part of the E3 region.

Claim 31. (Previously Presented) The vector of claim 15, wherein said viral vector is a poxviral vector deriving from a poxvirus.

Claim 32. (Currently Amended) ~~the~~ The vector of claim 31, wherein said poxvirus is selected from the group consisting of vaccinia virus, MVA and canarypox.